

Shunsuke SERIZAWA*: Taxonomical notes on Asian ferns (6)**

芹沢俊介*: アジア産シダ植物考察 (6)**

20. **Diplazium dilatatum** Bl. Enum. Pl. Jav. 194 (1828).—*Diplazium uraiense* Ros. Hedwigia 56: 336 (1915).

var. **dilatatum**

Distr. widely distributed in tropical and subtropical regions of Asia, extending north to the southern parts of Japan.

var. **heterolepis** Serizawa, var. nov.—*Diplazium dilatatum* var. *uraiense* (Ros.) Kurata in Nameg. et Kurata, Enum. Jap. Pterid. 340 (1961), pro parte; Serizawa, Journ. Geobot. Kanazawa 20: 8 (1972).

A var. *dilatato* squamis latoribus brunneis et vix discoloribus differt.

A large, terrestrial and evergreen fern. Rhizomes ascending or shortly creeping in juvenile plants, but erect in well grown ones. Stipes tufted, up to 65 cm long and 7 mm thick, scaly in the lower parts; scales on the base of stipes narrowly lanceolate or subulate, 10-15 mm long and 1-3 mm wide, tortuous at the apex, brown, the margin sparsely toothed, mostly not differentiated from the inner parts in colour, but in a few large scales partly and narrowly dark-coloured. Laminae ovate, up to 100 cm long and 65 cm wide, dull-green in colour, bipinnate (but in young plants frequently bipinnatifid), rachises and costae with a few small lanceolate to fibrillose scales; pinnae alternate, 6-8 on each side of the rachis, narrowly ovate or lanceolate, up to 40 cm long and 18 cm wide, acuminate at the apex, the lowest one or two pairs more or less abbreviated; pinnulae in the largest pinnae 12-14 pairs, narrowly triangular and usually broadest at the base, sometimes slightly falcate, up to 9.5 cm long and 2 cm wide, cut down to about 1/2 of the breadth at the basal parts, acuminate at the apex, truncate at the base and with stalks of about 1 mm long; segments roundish or truncate at the apex, and serrulate on the margin. Sori 2-5.5 mm long, in two oblique rows in each segment, touching the midrib at one end (but in less soriferous

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leaves not always so), basal acroscopic ones diplazioid.

Hab. Japan. Kusakawa, Isl. Yakushima, Pref. Kagoshima, alt. ca. 20 m (S. Serizawa no. 7627, Aug. 2, 1968-holotype in TNS).

Distr. Japan (the southernmost parts of Honshu and Kyushu) and the Ryukyus (Isl. Tokunoshima and Isl. Okinawa).

The present fern is very similar to *Diplazium dilatatum* var. *dilatatum* in general habit, but differs from it in ovate and dull-green laminae, narrowly triangular pinnulae, and not so copious, broader, and hardly black-bordered scales. The well grown plants of var. *dilatatum* have deltoid or broadly ovate and deep-green laminae, lanceolate pinnulae, and very copious scales at the base of stipes. The scales are subulate or linear, up to 23 mm long but at most 2 mm wide, and conspicuously black-bordered. Some of the young plants of var. *dilatatum*, however, have brown scales without black border. The discrimination of the present fern from such individuals may be rather difficult.

Kurata (1961) referred the present fern to *D. uraiense*. He regarded it as a variety of *D. dilatatum*, and proposed a new name "*D. dilatatum* var. *uraiense*". I agree with him in the systematic position and rank of this fern. However, the isotype specimen of *D. uraiense* (U. Faurie no. 185) deposited in the herbarium of Kyoto University is not the present fern but a form of *D. dilatatum* var. *dilatatum* having small and narrow pinnulae. I, therefore, would like to describe the present fern as a new variety of *D. dilatatum*.

21. **Diplazium** × **hutohanum** Kurata, in sched., hybr. nov. (= *Diplazium amamianum* × *dilatatum*)

Planta inter *D. amamianum* et *D. dilatatum* quasi intermedia; ab anteriore stipitibus ad basim primo conspicue squamatis, pinnulis majoribus usque 13 cm longis et minus dissectis, et soris costalibus differt; a posteriore squamis stipitum deciduis brevioribus et vix discoloribus, pinnulis pinnatifidis vel pinnatipartitis, et soris brevioribus distinguenda.

A large, terrestrial and evergreen fern. Rhizomes erect. Stipes tufted, up to 80 cm long and 13 cm thick, sometimes slightly muricate at the base, at first scaly in the lower parts but later glabrescent; scales on the base of stipes lanceolate or narrowly lanceolate, 7-10 mm long and 1-2.5 mm wide, brown and hardly black-bordered. Laminae up to 140 cm long and 100 cm wide, bipinnate; pinnulae narrowly lanceolate, up to 13 cm long and

1.8 mm wide, cut down to 1/2-5/6 of the breadth. Sori 1.5-4 mm long, touching the midribs at one end, indusia irregularly denticulate at the margin; sporangia mostly abortive.

Hab. The Ryukyus: Hatsuno, Setouchi-cho, Isl. Amami-oshima, alt. ca. 180 m (S. Serizawa no. 11688, April 8, 1970-holotype in TOFO); Nishi-nakama, Sumiyo-son, Isl. Amami-oshima, alt. ca. 50 m (M. Hutoh no. 21173, July 30, 1959, TOFO).

Distr. The Ryukyus (Isl. Amami-oshima).

The present fern is sporadically found in the mountainous region of Isl. Amami-oshima, where *Diplazium amamanum* and *D. dilatatum* (var. *dilatatum*) grow abundantly. It is morphologically intermediate between these two species, and supposed to be their natural hybrid. The sporangia are mostly abortive, and when they ripen, the spores are irregular. The epithet of the binary name is dedicated to the late Dr. M. Hutoh, who first noticed this hybrid.

Tagawa (1959) cited Isl. Amami-oshima as a locality of *Diplazium yaku-montanum*. Hatusima (1971) also listed *D. yaku-montanum* in his comprehensive flora of the Ryukyu Islands, and cited Isl. Amami-oshima as its locality. However, the specimens collected from this island and once identified by Tagawa as "*D. yaku-montanum*", e.g. Tagawa & Iwatsuki 3095 (KYO) and Iwatsuki 4868 (KYO), should be referred to the present hybrid. The true *D. yaku-montanum* is probably not yet known from the Ryukyus.

22. ***Dryopteris labordei*** (Christ) C. Chr. Ind. Fil. 273 (1905); Ching, Bull. Fan Mem. Inst. Biol. Bot. ser. 8: 488 (1938).—*Aspidium labordei* Christ, Bull. Soc. Bot. Fr. 52: 40 (1905).

var. ***labordei***—*Dryopteris indusiata* var. *yosimatuana* Suzuki, Journ. Jap. Bot. 11: 647, fig. 3 (1935).

Distr. The Ryukyus (Isl. Okinawa), Taiwan, and the mainland of China.

var. ***indusiata*** (Makino) Serizawa, comb. nov.—*Nephrodium gymnosorum* var. *indusiatum* Makino, Bot. Mag. Tokyo 13: 65 (1899).—*Dryopteris indusiata* Makino et Yamamoto ex Yamamoto, Suppl. Ic. Pl. Formos. 5: 3 (1932); H. Ito, Journ. Jap. Bot. 9: 57 (1933), Bot. Mag. Tokyo 50: 69 (1936); Tagawa, Col. III. Jap. Pterid. 104, 209, fig. 218 (1959).—*Dryopteris labordei* auct. non C. Chr.: H. Ito in Nakai et Honda, Nova Fl. Jap. 4: 45 (1939), pro parte, quoad pl. ex Japon.

Distr. Japan (southern parts of Honshu, Shikoku, Kyushu).

var. **purpurascens** (H. Ito) Serizawa, comb. nov.—*Dryopteris purpurella* Tagawa, Acta Phytotax. Geobot. 1: 307 (1932), Col. III. Jap. Pterid. 104, 212, fig. 216 (1959).—*Dryopteris erythrosora* var. *purpurascens* H. Ito, Bot. Mag. Tokyo 50: 69 (1936), in Nakai et Honda, Nova Fl. Jap. 4: 41 (1939).—*Dryopteris indusiata* var. *purpurascens* Kurata, Journ. Geobot. Kanazawa 10: 99 (1962).

Distr. Japan (the southernmost parts of Honshu, Shikoku, Kyushu) and the Ryukyus (Isl. Ishigaki).

Dryopteris indusiata is a member of the *D. erythrosora* complex, and is a fern rather common in the southern parts of Japan. This fern is extremely polymorphic, but its representative form is characterized by gradually attenuated apical portions of laminae and reduced basal basiscopic pinnulae of the lowest pinnae. The laminae are rather large, and up to 60 cm long. The pinnae are up to 10 pairs, almost sessile, divaricated from the rachis at a right angle, and curved upwards. On the other hand, *D. labordei* of the Ryukyus, Taiwan and the mainland of China has rather abruptly attenuated apical portions of laminae, and not so conspicuously reduced (often more or less enlarged) basal basiscopic pinnulae of the lowest pinnae. The laminae are medium-sized, 25–35 cm long, and the pinnae are at most 6 pairs. The stalks of pinnae are short but distinct. These two “species” cannot be regarded as completely identical. Some of the Japanese plants, however, are very similar to *D. labordei*. These two seem to be more appropriately treated as two geographical varieties of a single species.

Kurata (1962) regarded *D. purpurella* as a variety of *D. indusiata*. This treatment seems to be adequate, for we can find many intermediates between the two in the southern parts of Kyushu.

The three varieties of *D. labordei* may be distinguished as follows:

Sori submarginal; stipes and rachises purplish.....var. *purpurascens*
Sori subcostal; stipes and rachises not purplish.

Laminae gradually attenuated above; basal basiscopic pinnulae of the lowest pinnae reduced; plants in Japan.....var. *indusiata*

Laminae rather abruptly attenuated above; basal basiscopic pinnulae of the lowest pinnae often enlarged; plants in the Ryukyus, Taiwan and the mainland of China.....var. *labordei*

References

- Hatusima, S., 1971. Fl. Ryukyus 187. Kurata, S., 1961. in Nameg. et Kurata, Enum. Jap. Pterid. 290, 340. —, 1962. Journ. Geobot. Kanazawa 10: 97-99. Tagawa, M., 1959. Col. III. Jap. Pterid. 138.

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20. ニセヒロハノコギリシダ *Diplazium dilatatum* var. *heterolepis* はヒロハノコギリシダによく似たシダであるが、葉柄基部の鱗片が狭披針形～のみ形でやや幅広く、辺縁はほとんど黒くならない点で区別される。葉身は卵形で表面はくすんだ緑色、小羽片はよく発育した株では細長い三角形で、通常基部が最も幅広い。本州（紀伊半島那智）、九州（屋久島）および琉球列島の徳ノ島と沖縄本島に分布しており、屋久島ではヒロハノコギリシダよりもずっと少ないが、ヒロハノコギリシダがほぼ低地に限られるのに対し、本変種のほうは小杉谷附近の標高 800 m くらいの所にも見られる。

21. アマミヒロハノコギリシダ *Diplazium* × *hutohanum* はアマミシダとヒロハノコギリシダの自然雑種と推定されるシダで、両者のほぼ中間的な特徴をそなえており、前者からは若い葉では葉柄基部の鱗片が目立つこと、小羽片は大きく、切れ込みが浅いこと、胞子のう群が中肋寄りにつくことなどで、後者からは鱗片は脱落性で辺縁がほとんど黒くならないこと、小羽片の切れ込みが深いこと、胞子のう群が短いことなどで区別される。

22. 台湾から記載されたタヌキンシダは、中国大陆の *Dryopteris labordei* と同じものである。沖縄本島で従来スカイタチンダモドキと呼ばれていたシダも、このタヌキンシダにあたる。このシダはスカイタチンダモドキによく似ているが、典型的なスカイタチンダモドキは葉がやや大きく、葉身は長さ 60 cm に達し、先端は漸尖、側羽片は多いものでは 10 対くらいになり、ほとんど無柄で中軸からほぼ直角に開出し、最下羽片の下側第 1 小羽片は次の小羽片より短くなるから、それと全く同じものとは考えられない。しかし、スカイタチンダモドキの分布域である屋久島以北にもタヌキンシダからほとんど区別できないような個体があるから、両者は別種ではなく、同一種内の地理的変種であろう。スカイタチンダモドキの学名の変更にともない、ムラサキベニシダの学名も変更を要する。